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BASUTOLAND

Annual Report of the Department of Agriculture

For the Report Year ended 30th September,

1942

Francis, Bth.

BASUTOLAND

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FOR THE YEAR ENDED 30th SEPTEMBER, 1942.

This report covers very briefly the work of the Department under three main headings:—

(1) Agriculture.
(2) Veterinary and Livestock.
(3) Anti-Erosion Work.

Mr. R. W. Thornton, C.B.E., retired from the Directorship of the Department on the 25th December, and the vacancy thus created was filled by the appointment of Mr. W. G. Leckie, M.B.E., B.Sc.

The progress made by the African staff, towards qualifying for posts of greater responsibility, is marked by the promotion of three members of this staff to be Agricultural and Livestock and Veterinary Assistants.

Agricultural development under war-time conditions has, of necessity, to be directed mainly towards increased food production. In view of the serious outlook in regard to food supplies, caused by the adverse season experienced, a strong drive was made to persuade the people to increase the production of winter wheat in the Lowlands. This drive was successful, and a record acreage was planted to wheat in May and June. The resulting crop looked most promising when the Report Year ended on the 30th September. A further drive for increased production of spring sown crops was made throughout the winter, with excellent co-operation from the people. In order that adequate supplies of seed should be available to plant the greatly increased acreage ploughed, the Government voted £15,000 for the purchase of seed of wheat, maize, beans and vegetables.

The greatest problem with which the Department is faced, is the raising and maintenance of soil fertility all over Basutoland. For this purpose a large scale tree planting campaign has been inaugurated so that wood will be available to replace the manure which is at present used as fuel. Small farms are also being instituted, on which an attractive system of farming can be demonstrated together with proper land management.

Anti-erosion work has progressed satisfactorily, in spite of frequent mechanical break-downs and the difficulties and delays experienced

in obtaining spare parts. There was an increase of 2,450 acres over last year in the area worked, and a slight reduction in the cost of the work per acre.

Owing to the broken topography of the greater part of the Territory, anti-erosion work, of the type requiring heavy equipment, cannot be undertaken. In these areas the laying out of contour grass strips through arable land has been commenced and over 9,000 acres have been protected in this way.

The wheat breeding work was continued, the object being to obtain a strong growing wheat of high milling quality and suited to local conditions. One hundred and sixty selections of the F 3 generation were made; the Talberg-Garnet and Talberg-Reward being the most promising.

Good selections of strains have been made of local and imported sorghum and maize varieties.

The importance of Soya beans in the diet of the people is recognised, and very successful trials of this crop have been carried out. The strain 35. S. 277, from Potchefstroom, has been selected as the most suitable, and is being bulked for issue.

No serious outbreaks of disease have occurred amongst livestock during the year, and the various schemes for the improvement of sheep, cattle and equines have progressed satisfactorily.

The breeding of poultry has been commenced in Maseru, with a view to making issues of cockerels to the people in order to improve the local types of poultry.

The Government classing of wool is extending, and flock owners are showing marked enthusiasm for the scheme of simple wool classing, which they can carry out themselves. The production of wool is Basutoland's greatest industry, and it is pleasing to record that in the coming season a still higher price is to be paid for wool by the British Wool Commission.

CONCLUSION:

I should like to record my appreciation for the helpful co-operation in the work of this Department given by all Government officers, and particularly to my staff for their good work this year.

(Signed) W. G. LECKIE,
Director of Agriculture.

AGRICULTURAL DIVISION.

Part I.

STAFF:

Native: Thirty-four Agricultural Demonstrators were employed.

Part II.

Good rains fell during October, but November was very dry, only 7 inches being recorded. Frost occurred during this month doing very considerable damage to the spring sown crops at the higher altitudes. December was also a dry month, but early in January good rains fell, which continued at intervals until April, when frosts occurred stopping all plant growth. The winter was very cold and dry; as much as 24 degrees of frost being registered at Maseru.

The average rainfall for the territory was 28.51 inches as against 28.11 inches of the previous year. Practically all this rain, however, fell in heavy showers and was badly distributed.

REPORT ON THE CONDITION OF THE CHIEF AGRICULTURAL CROPS.

The wheat crop in the Lowlands was almost an entire failure. The maize crop, both in the Lowlands and the Foot-hills, was the worst for some years. Kaffir-corn, where planted early enough, produced a fair crop, but, on the whole, the crop was only approximately 60 per cent. of that of the previous year.

The mountain crop of wheat was poor when compared with that of last season.

Bean and pea crops were poor. A much smaller acreage of peas than usual was planted in the mountain districts.

INCIDENCE OF INSECT PESTS.

No swarms of Brown or Red Winged locusts invaded the Territory. Less damage was done by the "Elegant Grasshopper" than during the previous season.

Maize stalk borer and cut-worm, owing to the late planting season, did not do the usual amount of damage to crops.

Aphis was very prevalent and damaged peach trees, kaffir-corn and garden produce.

The army worm made its appearance in the autumn and damaged the grazing, especially in parts of the Mafeteng district.

ESTIMATES OF AGRICULTURAL PRODUCTION FOR 1942 AND THE PRECEDING YEARS.

Crops.	1937.	1938.	1939.	1940.	1941.	1942.
Maize	1,135,983	873,750	758,835	691,542	1,055,268	527,634
Sorghum	297,117	197,812	164,129	139,965	274,156	164,493
Wheat	383,645	257,812	364,802	398,861	394,688	182,187
Peas, Beans and other Crops ...	148,558	109,218	156,562	133,353	73,593	36,796

Remarks: These crop returns are given in bags of 200 lbs.

AGRICULTURAL ASSOCIATIONS.

There are at present one hundred and forty-one Associations in Basutoland, consisting of:—

27 Men's Associations.

73 Women's Associations.

41 Mixed Associations.

The combined membership of all associations is 4,338.

MARKETS FOR NATIVE PRODUCE.

The markets were well patronised. A considerable amount of surplus vegetables and fruit was sold.

AGRICULTURAL SHOWS.

Shows, owing to the adverse agricultural season, were only held at two centres. The exhibits in the Produce and Vegetable Classes were excellent, considering the poor season.

The cattle exhibited at the Roma Show were the best seen at any Show for some years.

A class for the best milk cow—Basuto type—has been added to the classes in the Cattle Section.

RODENT DESTRUCTION.

During the period under review there has been, in some districts, a considerable increase in rodents. This matter is being dealt with by the Medical Department, and the Agricultural Department is co-operating as far as possible. The situation has improved since the beginning of the season and is now under control.

LECTURES AND DEMONSTRATIONS.

During 1941-42, one hundred and thirty-one lectures and demonstrations were carried out by the Agricultural Officers and six hundred and thirty-two by the Native Agricultural Staff; 31,200 persons attended. The District Commissioners and members of the Agricultural Staff held numerous Pitsos throughout the Territory at which it was endeavoured to impress upon the people the great necessity for increasing food production during the war and of supplementing the present food supply, which is very short owing to last year's bad harvest.

Many demonstrations were given as to the correct methods of laying out grass strips in the arable lands in the foot-hill and mountain areas, and very satisfactory progress has been made.

SCHEME FOR IMPROVEMENT OF WHEAT AND METHODS OF SALE.

This scheme, which is based on a Five Year Plan for the Improvement of Wheat and the Methods of Sale, was instituted in 1940. After a few seasons a notable improvement will, undoubtedly, be seen.

The chief objects of the scheme are:—

(a) To produce high protein wheat throughout the Territory.

(b) To eliminate Smut.

(c) To ensure that all wheat shall leave the country in a clean condition.

The growing of Marquis wheat is proceeding, especially in the mountains and foot-hills. The other varieties imported from Canada are being tested as to their rust resistance and yields, before being recommended for planting on a large scale. In the Lowlands, Red Egyptian and Wolkoren, which are wheats of good milling qualities, will be the chief varieties grown. Eighty bags of Wolkoren were purchased for distribution. The wheat season under review was a very bad one in the Lowlands and only fair in the mountain districts.

During the season 1941-42, a total crop of 634½ bags of Marquis wheat was produced from seed issues made by the Government. Owing to the bad wheat season in the Lowlands this crop is much less than that produced last year, which was 3,607½ bags. 162½ bags were returned for re-issue, 46 bags were bought, 182½ were not issued in 1941-42, making a total of 391 bags for re-issue during 1942-43. 88 bags of Government Selected Marquis wheat were sold for seed by the traders. In the mountain district numbers of growers of Marquis wheat own their own seed.

REPORT ON GENERAL DEMONSTRATION WORK CARRIED OUT IN THE TERRITORY DURING 1941-42.

The results of the agricultural demonstration work carried out during the season were most outstanding, and provided remarkable demonstration of the good results to be achieved from improved methods of cultivation.

Field Competitions were held for the best cultivated fields of Spring and Autumn sown crops. 408 entries were made in the various demonstration centres. A sum of £30 10s. 0d. was expended in prize money for these Field Competitions. Of a total of 352 wheat demonstration plots, 255 plots of 950 acres were complete failures.

The following are the particulars of the demonstration work carried out during the season.

RESULTS OF DEMONSTRATION WORK FOR THE YEAR 1941-42

Crop.	Demonstration Plots.			Native Worked Check Plots.		
	No. of Plots.	Acreage.	Yield per acre in bags of 200 lbs.	No. of Plots.	Acreage.	Yield per acre in bags of 200 lbs.
Wheat	97	281	1.04	56	190	.82
Maize	238	761	3.63	256	815	1.86
Sorghum	69	215	3.52	118	274	1.37
Peas, Beans	24	56	1.89	2	3	2

VEGETABLE GARDENING AND FRUIT CULTURE.

The Basuto are becoming more and more interested in vegetable gardening and fruit growing as a means of increasing their food supplies, also for obtaining a diversified diet and having produce to sell which will supply them with petty cash.

The season under review, owing to drought and untimely frosts, was a most difficult one for gardening during the spring and early summer. In spite of these conditions, however, many outstanding gardens were to be seen all over the Territory during autumn and early winter.

Competitions for the best gardens were held where warranted. These competitions, however, were not on such a large scale as usual, owing to the bad season. An amount of £48 5s. 0d. was expended in prize money. Out of the grand total of 7,663 gardens for the whole Territory, 1,547 were shown in these competitions.

There is an increase of 625 gardens this season over the number worked last year.

The usual free issue of vegetable seeds was made, preference being given to persons who were just starting their gardens or who had not had an established garden for more than three years.

6,895 Peach trees, 1,100 Vines and 200 other fruit trees, which had been raised in the Government nurseries, were distributed free to owners of well-worked gardens.

METHODS ADOPTED TO INCREASE FOOD PRODUCTION.

Owing to the partial failure of the Spring crops, the Government imported and issued to the Natives, on repayment, 594 bags of early maturing maize seed and 308 bags of beans. 3.364 bags of seed wheat were selected from stocks held by the Basutoland traders and sold on repayment to Native agriculturists.

A supplementary issue of vegetable seed was made to Native Gardeners.

COMPARATIVE MANURIAL TRIALS, 1941-42.

A number of manurial trials were carried out by the Agricultural Demonstrators.

(See Table on next page).

REPORT ON THE GOVERNMENT SCHEME FOR THE SUPPLY OF SUPERPHOSPHATE TO NATIVE FARMERS AT COST PRICE.

A total of 939 bags of superphosphate was bought by the Basuto during 1941-42, as against 758 bags for the previous season. Excellent results were obtained by most people using superphosphate.

Part III.

FINANCIAL STATEMENT.

Revenue.	Expendtiure
Nil.	£11,581 0s. 0d.

(Signed) L. F. WACHER,
Senior Agricultural Officer.

COMPARATIVE MANURIAL TRIALS RESULTS FOR 1941-42.

(The results of these trials are worked out to the nearest half bag and given in bags of 200 lbs.

CROP:	SUPERPHOSPHATE				KRAAL ASH				KRAAL MANURE				NO MANURE			
	No. of Plots	Acreage	Amount of fertiliser per acre	Bags per acre harvested	No. of Plots	Acreage	Amount of fertiliser per acre	Bags per acre harvested	No. of Plots	Acreage	Amount of fertiliser per acre	Bags per acre harvested	No. of Plots	Acreage	Amount of fertiliser per acre	Bags per acre harvested
MAIZE	21	21	200 lbs. per acre	6	11	11	Approx. 5,000 lbs. per acre	5	12	12	Approx. 2 tons per acre	6	20	20	Check Plot no Manure	2

VETERINARY AND LIVESTOCK DIVISION.

STAFF CHANGES: Europeans: The strength of the European staff remained the same as last year, the only changes being (a) the transfer of Mr. N. O. Halse from Veterinary Area No. 3 to Veterinary Area No. 3a; (b) the handing over of Veterinary Area No. 3 to Mr. R. K. Tennant; (c) the death of Mr. R. R. Horne who was seconded from Agriculture (1) to Agriculture (2); (d) the appointment of Mr. J. G. S. Bennie to the fixed and pensionable establishment.

AFRICAN: Messrs. A. Mathule and E. G. T. Ntsasa were each appointed to the post of Agricultural and Livestock Assistant. The former superseded Mr. A. P. J. Mohasi, who reverted to the post of 1st Veterinary Assistant ranking as Grade I, and was posted to Veterinary Area No. 5, hitherto controlled by a European officer.

Part I.

REVIEW OF GENERAL LIVESTOCK POSITION.

The steady improvement, ascribable in some measure to the various livestock schemes inaugurated in the Territory, continues to be made. Weather conditions were on the whole unsatisfactory and mortality higher than the previous year. Evidence of the latter can be seen in the increase of the number of hides and skins exported.

Part II(a).

MAIN FEATURES OF THE DIVISION'S WORK ON DISEASE CONTROL.

ANTHRAX: One outbreak of Anthrax occurred during the year. Owing to early detection the mortality was confined to two head of cattle.

QUARTER EVIL: Many outbreaks of Quarter Evil were dealt with by inoculation with preventive vaccine. The people are now responding to the advice given to them to report outbreaks and they are gradually realizing the benefits of prompt detection and preventive treatment.

EQUINE MANGE: Equine mange manifested itself in some districts, but as it is a notifiable disease prompt measures taken kept it in check.

BLUE TONGUE: (Catarrhal Fever): Very few outbreaks occurred. Mortality was low, only a few farmers resorted to preventive inoculation.

SOUTH AFRICAN HORSE-SICKNESS: Only a few outbreaks were recorded.

INTERNAL PARASITISM OF SMALL STOCK: The compulsory monthly dosing of small stock under official supervision was carried out for seven months only. A survey was carried out to ascertain if small stock suffered any reverse as the result of the suspension of dosing during the months of October, November, December, January and February when the staff was engaged on wool classing operations. The survey disclosed setbacks in certain areas.

Part II(b)

ANIMAL HUSBANDRY.

(1) SMALL STOCK: No census of small stock was taken during the year. Small stock owners are apathetic to voluntary dosing hence the necessity of providing official supervision. The classing of wool under official supervision has again widened and the scheme has received still greater patronage. The poundage of wool classed under official supervision was 1,339,717 lbs. representing an increase of 345,151 lbs. over the previous season. The total poundage of wool exported for the year was 8,495,830, approximately 16 per cent. of which was classed under official supervision. The number of qualified African wool classers is:—

Government employees	53
Traders' employees	19
	72

The following table summarises the position during the last five seasons:—

	1937-38.	1938/39.	1939/40.	1940/41.	1941/42.	Remarks.
No. of flocks ...	505	772	965	2,437	2,894	
No. of sheep shorn	49,629	72,864	85.230	198,290	234,383	
Poundage of wool	250,645	347,440	383,200	980,187	1,325,338	
Average units per flock	98	94	88	81	81	
Average weight per sheep ...	5.05 lbs.	4.77 lbs.	4.5 lbs.	4.94 lbs.	5.7 lbs.	
Percentage of combing wool ..	29.32	29.89	33.23	30.44	27.94	
Percentage of short wool ...	17.28	21.85	20.28	14.79	13.61	
Percentage of XM wool ...	16.56	19.24	12.82	15.60	18.82	
Percentage of outsorts	36.84	29.02	33.67	39.67	39.63	
No. of bales of classed wool (average weight per bale eq. 320 lbs.)	783	1,086	1,198	3,063	4,142	

Remarks:—The average weight of wool per sheep does not reflect the annual production per unit as the animals shorn include lambs and many sheep with a six months' growth. The percentage of combing wool is the lowest recorded for five years. This is attributable to the dryness of the season, necessitating the removal of a large percentage of BKS. The percentage of XM is higher than usual due to over-caution on the part of classers who graded all doubtful fleeces as XM. Coastal brokers remarked that much of the XM wool was too good to be appraised as such.

During the current financial year 808 Merino rams were introduced from the Union by the Government, for re-sale to African farmers, making a total of 4,458 Merino rams introduced since the inception of the scheme in 1935. In addition, hundreds of good quality Merino rams were introduced by private enterprise which is encouraging. Owing to the great demand for slaughter sheep at enhanced prices there has been a considerable increase in the export figures in respect of this class of sheep.

Generally the price of mohair was maintained at a satisfactory and remunerative level. The total poundage of mohair exported during the report year was 1,520,520. The average prices were:— No. 1, 13d. per lb.; No. 2, 10½d. per lb.; No. 3, 9d. per lb.; C. and C., 6d. per lb.

(2) CATTLE: No cattle census was taken during the year. Many scrub bulls were eliminated by (a) castration by officers of the Department, and (b) sale by auction to Union butchers under the livestock sales scheme. Forty-nine pure bred bulls, viz.: 48 Afrikander and 1 Devon, were purchased by the Government and the former issued under the cattle improvement (loan) scheme to approved cattle breeders. The Devon bull was purchased for the bull camp scheme, making a total of 263 bulls purchased for the loan and 26 for the bull camp scheme, since the inauguration of the cattle improvement scheme.

(3) EQUINES: No census of equines was taken during the year. Many "scrub" stallions were emasculated by officers of the Department. No thoroughbred stallions or donkey "jacks" have been purchased so far this financial year. The Department is concentrating on the erection of stud stables and already one has been completed at Mafeteng and the other is in course of erection at Quthing. The total number of stallions and donkey "jacks" purchased since the equine improvement scheme was initiated in 1936 is 64 and 42 respectively:—

(For Livestock Table see Part IV).

Part 2(c).

MARKETING OF ANIMALS AND ANIMAL PRODUCTS.

AUCTION SALES SCHEME: During the year 2,539 head of cattle were sold under the scheme. This figure represents an increase of 236 head of cattle over the previous year. The scheme is becoming increasingly popular due to the enhanced ruling prices. Pratically all

the cattle sold at the 3 livestock sales centres were exported to the Union, having been bought by butchers resident across the border.

The following comparative table gives details of the period covered since the scheme was started:—

Report Year.	No. of Sales.	No. of Cattle Sold.	Total Amount Realized.	Average Price.
			£ s. d.	£ s. d.
1938/39	10	257	1,560 14 7	6 1 5½
1939/40	11	784	5,042 17 6	6 6 7¾
1940/41	18	2,303	14,740 19 6	6 8 0¼
1941-42	18	2,539	20,701 6 6	8 3 0¾
TOTALS	57	5,883	42,045 18 1	7 2 11½

Number of sheep sold during the above period—53.

Number of horses sold during the above period— 2.

FOR EXPORTS OF BONES, WOOL AND MOHAIR, see PART IV.

Part III.

NEW LEGISLATION:

(1) Proclamation No. 28 of 1942, entitled "The Basutoland Wool Packing and Marking Proclamation, 1942."

(2) High Commissioner's Notice No. 197 of 1942, relating to the packing and marking of wool intended for sale in Basutoland.

Part IV.

STATISTICS.

	Sheep.	Goats.	Cattle.	Horses.	Mules.	Donkeys.
Doses administered for worms ..	5,731,139	2,209,523	—	538	—	—
Inspections ...	5,731,139	2,209,523	—	102,234	—	—
Castrated by Officers	23,369		2,225	899	—	—
Treated for external parasites ...	132,045	—	104	398	—	—
Exports	2,479	10	14,317	369	3	5
Imports	28,410	258	17,754	2,540	81	530
Wool exported—lbs.	8,495,830	—	—	—	—	—
Mohair exported lbs.	—	1,520,520	—	—	—	—
Bones exported—lbs.	—	—	451,510	—	—	—
Wool classed—lbs.	1,339,717	—	—	—	—	—
Hides exported—Units	—	—	27,241	—	—	—
Skins exported—Units	20,365		—	—	—	—
Inoculations—Anthrax ...	—	—	37,324	—	—	—
Inoculations—Quarter Evil ...	—	—	17,742	—	—	—
Inoculations—Anaplasmosis ..	—	—	437	—	—	—
Inoculations—Horse sickness	—	—	—	296		—
Inoculations—Blue Tongue ...	1,038	—	—	—	—	—
Dosed for Fluke ..	42,240	—	—	—	—	—
Services by Government Sires ..	—	—	2,109	778	—	149

Part V.

REVENUE.	EXPENDITURE.
£3,128 0s. 0d.	£14,469 15s. 11d.

The above figures are for the financial year ended 31st March, 1942. The revenue figures shown does not include revenue paid in by Officers to the District Commissioners.

(Signed) G. T. HENBERSON,
Principal Veterinary Officer.

ANTI-EROSION WORK.

The anti-erosion work stood up remakably well to the very sharp and heavy downpours of rain which occurred in January, when 4 to 5 inches fell in a single hour.

Two of the officers engaged in anti-erosion work were transferred: Mr. Roberts, the Agricultural Engineer, to Swaziland, and Mr. Wande, Agricultural and Livestock Officer, to Bechuanaland.

With the reduction in the size of the labour gangs available, it was found possible to release seven of the fifteen foremen for war service.

War conditions have, to a large extent, adversely affected the output of work and costs of construction. Great difficulty has been experienced in obtaining spare parts for tractors and machinery, but, in spite of this, an increased acreage has been terraced and the cost of construction slightly reduced.

The progress in the principal sections of the work during the year is reflected in the following schedule:—

Measure.	Previous to 1942.	During 1942.	Total to end of 1942.
Area terraced, acres	77,642.1	17,952.2	95,594.3
Length of terrace constructed, yards	8,366,000	1,711,399	10,077,399
Number of dams constructed	102	20	122
Number of trees planted ...	551,820	75,454	627,274
Area fenced, acres	2,195	48	2,243

1,465,977 cubic yards of earth were moved in constructing the 1,711,399 yards, or approximately 1,000 miles, of terrace during the year.

The use of grass inlets or meadow strips for the disposal of water has proved a success, and 43 of these spillways have been constructed during the year. In addition, all contour banks through grazing lands have been planted to Kikuyu.

The amount of water impounded at full supply level by the twenty major dams constructed during the year is 81,500,000 gallons.

It has been found possible to reduce slightly the cubic capacity of terraced banks on slopes of less than 10 per cent., but this modified system only came into operation towards the close of the year under review, so that the saving effected on this modified system is not reflected, to any appreciable extent, in this year's figures.

Owing to the broken nature of the country, heavy contour works cannot be constructed in the foot-hills and mountains, which comprise the greater part of the area of the Territory. In these areas a system

of contour grass strips through arable land has been introduced and 9,683 acres have been protected with these strips at a cost of 7d. per acre. These contour strips compel the farmer to plough on the contour which in itself reduces run-off and erosion by at least 50 per cent.

The mean cost of all anti-erosion work completed during the year 1942, was 12.22/- per acre, which is .21/- less per acre than for 1941. This figure includes supervision and transport expenditure, running cost of power plant, cost of labour, etc., in all the various works, such as terracing, tree planting and dam construction, but excludes all overhead departmental expenditure and depreciation on plant and equipment.

(Signed) L. H. COLLETT,

Acting Engineer to the Agricultural Department.